

Res. Asst. BERKAY ÇİFTÇİ

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Biography

Berkay Ciftci received his B.Sc. and M.Sc. degrees in Electrical and Electronics Engineering from the Middle East Technical University (METU), Ankara, Turkey, in 2017 and 2020, respectively. He was employed as a Research and Teaching Assistant for three and a half year at METU. In the context of the project called “A Fully-Implantable MEMS Based Autonomous Cochlear Implant” which is funded from European Research Council (ERC), he was involved in design of interface electronics and power management circuits for MEMS based energy harvesters. His paper called “An Autonomous Interface Circuit Based on Self-Investing Synchronous Energy Extraction for Low Power Piezoelectric Energy Harvesters” won the Outstanding Paper Award in 2018 PowerMEMS Conference. His research interests include design and implementation of analog/mixed-signal and RF integrated circuits, low-power sensors and bio-electronic interfaces.

Research Areas

Electronic

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **A Low-Profile Autonomous Interface Circuit for Piezoelectric Micro-Power Generators**
ÇİFTÇİ B., Chamanian S., Koyuncuoglu A., Muhtaroglu A., KÜLAH H.
IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS I-REGULAR PAPERS, vol.68, no.4, pp.1458-1471, 2021 (SCI-Expanded)
- II. **A Self-Powered and Area Efficient SSHI Rectifier for Piezoelectric Harvesters**
Chamanian S., ÇİFTÇİ B., Muhtaroglu A., KÜLAH H.
IEEE ACCESS, vol.9, pp.117703-117713, 2021 (SCI-Expanded)
- III. **Power-Efficient Hybrid Energy Harvesting System for Harnessing Ambient Vibrations**
Chamanian S., ÇİFTÇİ B., Ulsan H., Muhtaroglu A., KÜLAH H.
IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS I-REGULAR PAPERS, vol.66, no.7, pp.2784-2793, 2019 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

- I. **Low-Cost Fully Autonomous Piezoelectric Energy Harvesting Interface Circuit with up to 6.14x Power Capacity Gain**

ÇİFTÇİ B., Chamanian S., Ulsan H., Yigit H. A., Koyuncuoglu A., Muhtaroglu A., KÜLAH H.

40th Annual IEEE Custom Integrated Circuits Conference (CICC), Texas, United States Of America, 14 - 17 April 2019

II. **A Pulse-Width Modulated Cochlear Implant Interface Electronics with 513 μ W Power Consumption**

Yigit H. A., Ulsan H., YÜKSEL M. B., Chamanian S., Ciftci B., Koyuncuoglu A., Muhtarolu A., KÜLAH H.

IEEE/ACM International Symposium on Low Power Electronics and Design (ISLPED), Lausanne, Switzerland, 29 - 31 July 2019

Metrics

Publication: 5

Citation (WoS): 35

Citation (Scopus): 70

H-Index (WoS): 3

H-Index (Scopus): 4